

Intravenous fluid therapy in adults in hospital

Quality standard

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This standard is based on CG174.

This standard should be read in conjunction with QS5, QS15, QS61, QS63, QS76, QS110, QS131 and QS166.

Introduction

This quality standard covers the assessment and management of adults' intravenous (IV) fluid needs in hospital. IV fluid therapy is the provision of fluid and/or electrolytes directly into the vein. This quality standard does not cover the use of blood or blood products. For more information see the [intravenous fluid therapy in adults in hospital topic overview](#).

Why this quality standard is needed

Many adult hospital inpatients need IV fluid therapy to prevent or correct problems with their fluid and/or electrolyte status. This may be because their normal needs cannot be met through enteral routes (for example, they have swallowing problems or gastrointestinal dysfunction) or because they have unusual fluid and/or electrolyte deficits or demands caused by illness or injury (for example, high gastrointestinal or renal losses). Deciding on the optimal amount and composition of IV fluids to be administered and the best rate at which to give them can be a difficult task, and decisions must be based on careful assessment of the patient's individual needs.

Management

Errors in prescribing IV fluids and electrolytes are particularly likely in emergency departments, acute admission units, and general medical and surgical wards rather than in operating theatres and critical care units. Surveys have shown that many staff who prescribe IV fluids know neither the likely fluid and electrolyte needs of individual patients, nor the specific composition of the many choices of IV fluids available to them. Standards of recording and monitoring IV fluid and electrolyte therapy may also be poor in these settings. IV fluid management in hospital is often delegated to the most junior medical staff who frequently lack the relevant experience and may have received little or no specific training on the subject.

The National Confidential Enquiry into Perioperative Deaths report in 1999 highlighted that a significant number of hospitalised patients were dying as a result of infusion of too much or too little fluid. The report recommended that fluid prescribing should be given the same status as drug prescribing. Although mismanagement of fluid therapy is rarely reported as being responsible for patient harm, it is likely that as many as 1 in 5 patients on IV fluids and electrolytes suffer complications or morbidity due to their inappropriate administration.

The quality standard is expected to contribute to improvements in the following outcomes:

- Mortality or serious harm resulting from errors in IV fluid therapy.
- Patient experience of hospital care.
- Patient safety incidents reported.
- Length of hospital stay.

How this quality standard supports delivery of outcome frameworks

NICE quality standards are a concise set of prioritised statements designed to drive measureable quality improvements within a particular area of health or care. They are derived from high-quality guidance, such as that from NICE or other sources accredited by NICE. This quality standard, in conjunction with the guidance on which it is based, should contribute to the improvements outlined in the following 2 outcomes frameworks published by the Department of Health:

- [NHS Outcomes Framework 2014 to 2015](#)
- [Improving outcomes and supporting transparency: a public health outcomes framework for England 2013 to 2016, Part 1 and Part 1A.](#)

Coordinated services

The quality standard for IV fluid therapy in adults in hospital specifies that services should be commissioned from and coordinated across all relevant agencies encompassing the whole care pathway. A person-centred, integrated approach to providing services is

fundamental to delivering high-quality care to adults in hospital receiving IV fluid therapy.

The Health and Social Care Act 2012 sets out a clear expectation that the care system should consider NICE quality standards in planning and delivering services, as part of a general duty to secure continuous improvement in quality. Commissioners and providers of health and social care should refer to the library of NICE quality standards when designing high-quality services. Other quality standards that should also be considered when choosing, commissioning or providing a high-quality service of IV fluid therapy in adults in hospital are listed in [related NICE quality standards](#).

Training and competencies

The quality standard should be read in the context of national and local guidelines on training and competencies. All healthcare professionals involved in assessing, caring for and treating adults in hospital receiving IV fluid therapy should have sufficient and appropriate training and competencies to deliver the actions and interventions described in the quality standard.

Role of families and carers

Quality standards recognise the important role families and carers have in supporting adults in hospital receiving IV fluid therapy. If appropriate, healthcare professionals should ensure that family members and carers are involved in the decision-making process about investigations, treatment and care.

List of quality statements

Statement 1 Hospitals have an intravenous (IV) fluids lead who has overall responsibility for training, clinical governance, audit and review of IV fluid prescribing, and patient outcomes.

Statement 2 Adults receiving IV fluid therapy in hospital are cared for by healthcare professionals competent in assessing patients' fluid and electrolyte needs, prescribing and administering IV fluids, and monitoring patient response.

Statement 3 Adults receiving IV fluid therapy in hospital have an IV fluid management plan, determined by and reviewed by an expert, which includes the fluid and electrolyte prescription over the next 24 hours and arrangements for assessing patients and monitoring their plan.

Statement 4 For adults who receive IV fluid therapy in hospital, clear incidents of fluid mismanagement are reported as critical incidents.

Quality statement 1: Intravenous fluids lead

Quality statement

Hospitals have an intravenous (IV) fluids lead who has overall responsibility for training, clinical governance, audit and review of IV fluid prescribing, and patient outcomes.

Rationale

The IV fluids lead in a hospital can promote best practice, ensuring that healthcare professionals are trained in prescribing and administering IV fluid therapy, and reviewing learning from 'near miss' and critical incident reporting. This leadership role can ensure continuity of care in relation to fluid management through coordination between different hospital departments.

Quality measures

Structure

Evidence that hospitals have an IV fluids lead who has overall responsibility for ensuring adequate training, clinical governance, audit and review of IV fluid prescribing, and patient outcomes.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers (such as district general hospitals and specialist care centres) ensure that they have an IV fluids lead who has overall responsibility for ensuring adequate training, clinical governance, audit and review of IV fluid prescribing, and patient outcomes.

Healthcare professionals who care for adults receiving IV fluid therapy in hospital work in the context of clinical governance arrangements that have an IV fluids lead who has overall responsibility for ensuring adequate training, clinical governance, audit and review of IV fluid prescribing, and patient outcomes.

Commissioners (such as clinical commissioning groups and NHS England Area Teams) ensure that they commission services from hospitals that have an IV fluids lead who has overall responsibility for ensuring adequate training, clinical governance, audit and review of IV fluid prescribing, and patient outcomes.

Adults receiving IV fluid therapy are cared for in a hospital that has a person who has overall responsibility for ensuring that they receive safe and effective IV fluid therapy.

Source guidance

Intravenous fluid therapy in adults in hospital. NICE guideline CG174 (2013, updated 2017), recommendation 1.6.3 (key priority for implementation)

Definition of terms used in this quality statement

Responsible IV fluids lead

The IV fluids lead will have overall responsibility, through a leadership role, for the quality of care relating to IV fluid therapy. The IV fluids lead should be somebody in a senior position (such as the chief of medicine or the chief nurse), and may delegate specific functions through normal governance structures. The IV fluids lead is not expected to be the person who delivers the training, clinical governance, audit and review of IV fluid prescribing, and patient outcomes. Those functions can be delegated to professionals who have the necessary specialist knowledge in the hospital. [Expert opinion]

Training

Training in fluid management should also be embedded in both general and specialty training programmes, with clear curriculum-based teaching objectives and delineation of minimum standards of clinical competency and knowledge for each stage of training and clinical delivery. Recognition and management of the clinical complications of fluid management should also be considered. [NICE's guideline on intravenous fluid therapy in

adults in hospital]

Training in prescribing and administering IV fluids can be supported by the online e-learning module for NICE's guideline on intravenous fluid therapy in adults in hospital. The e-learning module uses interactive activities to support prescribers to safely assess, prescribe for and review adults needing IV fluids. The tool may also be useful for trainee prescribers to enhance their knowledge base before they start prescribing practice.

Quality statement 2: Healthcare professionals' competencies in hospitals

Quality statement

Adults receiving intravenous (IV) fluid therapy in hospital are cared for by healthcare professionals competent in assessing patients' fluid and electrolyte needs, prescribing and administering IV fluids, and monitoring patient response.

Rationale

Fluid assessment, prescription and administration are essential daily tasks in many hospital departments. These are complex responsibilities that entail careful clinical and biochemical assessment, good understanding of the principles of fluid physiology in health and disease, and appropriate supervision and training. Inadequate knowledge, failure to recognise the importance of fluid management in patient care and acting on this issue are major factors in poor fluid management, and poor education, training and supervision are major contributors. Different healthcare professionals will have different skills and competencies, relevant to their roles.

Quality measures

Structure

Evidence of local arrangements to ensure that adults receiving IV fluid therapy in hospital are cared for by healthcare professionals who are competent in assessing patients' fluid and electrolyte needs, prescribing and administering IV fluids, and monitoring patient response.

Data source: Local data collection.

Process

a) Proportion of healthcare professionals who are responsible for prescribing IV fluid therapy in hospital who are able to demonstrate competency in prescribing IV fluids.

Numerator – the number of healthcare professionals in the denominator who are able to demonstrate competency in prescribing IV fluids.

Denominator – the number of healthcare professionals who are responsible for prescribing IV fluid therapy in hospital.

Data source: Local data collection.

b) Proportion of healthcare professionals who are responsible for administering IV fluid therapy in hospital who are able to demonstrate competency in administering IV fluids.

Numerator – the number of healthcare professionals in the denominator who are able to demonstrate competency in administering IV fluids.

Denominator – the number of healthcare professionals who are responsible for administering IV fluid therapy in hospital.

Data source: Local data collection.

c) Proportion of healthcare professionals who are caring for adults on IV fluid therapy who are able to demonstrate competency in monitoring patient response.

Numerator – the number of healthcare professionals in the denominator who are able to demonstrate competency in monitoring patient response.

Denominator – the number of healthcare professionals who are monitoring adults on IV fluid therapy.

What the quality statement means for different audiences

Service providers (such as district general hospitals and specialist care centres) ensure

that systems are in place to ensure that adults receiving IV fluid therapy in hospital are cared for by a team of healthcare professionals competent in assessing patients' fluid and electrolyte needs, prescribing and administering IV fluids, and monitoring patient response.

Healthcare professionals involved in prescribing and delivering IV fluid therapy can demonstrate competence in assessing patients' fluid and electrolyte needs, prescribing and administering IV fluids, and monitoring patient response. Different healthcare professionals will have different skills and competencies, relevant to their roles.

Commissioners (clinical commissioning groups and NHS England area teams) ensure that they commission services from hospitals that are able to demonstrate that relevant healthcare professionals are competent in assessing patients' fluid and electrolyte needs, prescribing and administering IV fluids, and monitoring patient response. This can be achieved by requiring providers to supply training numbers for staff who have been trained and staff who have been assessed.

Adults receiving IV fluid therapy in hospital are cared for by a team of healthcare professionals who have the knowledge and skills to ensure that they receive safe and effective IV fluid therapy.

Source guidance

[Intravenous fluid therapy in adults in hospital. NICE guideline CG174](#) (2013, updated 2017), recommendations 1.6.1 (key priority for implementation) and 1.6.2

Definitions of terms used in this quality statement

Competencies of a team of healthcare professionals

Hospitals should establish systems to ensure that all healthcare professionals involved in prescribing and delivering IV fluid therapy are trained on intravenous therapy principles covered in [NICE's guideline on intravenous fluid therapy in adults in hospital](#), and are then formally assessed and reassessed at regular intervals to demonstrate competence in:

- understanding the physiology of fluid and electrolyte balance in patients with normal physiology and during illness

- assessing patients' fluid and electrolyte needs (the 5 Rs: Resuscitation, Routine maintenance, Replacement, Redistribution and Reassessment)
- assessing the risks, benefits and harms of IV fluids
- prescribing and administering IV fluids
- monitoring the patient response
- evaluating and documenting changes and
- taking appropriate action as required.

Competency needs to be tailored to the professional role, and may vary according to professional roles. For example, competency for senior clinicians will include active involvement in reviewing patients' fluid management plans, providing leadership to the junior team to ensure quality care.

Competency, in the context of this quality statement, includes IV fluid competencies relevant to people who are having total parenteral nutrition (TPN) but not competencies relating to the nutritional element of prescribing. [Adapted from [NICE's guideline on intravenous fluid therapy in adults in hospital](#), recommendation 1.6.1]

Staff competency in prescribing and administering IV fluids can be supported by the [online e-learning module for NICE's guideline on intravenous fluid therapy in adults in hospital](#). The e-learning module uses interactive activities to support prescribers to safely assess, prescribe for and review adults needing intravenous fluids. The tool may also be useful for trainee prescribers to enhance their knowledge base before they start prescribing practice.

Quality statement 3: Intravenous fluid management plan

Quality statement

Adults receiving intravenous (IV) fluid therapy in hospital have an IV fluid management plan, determined by and reviewed by an expert, which includes the fluid and electrolyte prescription over the next 24 hours and arrangements for assessing patients and monitoring their plan.

Rationale

Hospital inpatients may need IV fluid and electrolytes for fluid resuscitation, routine maintenance, replacement of existing deficits or abnormal ongoing losses, or complex issues of fluid redistribution. Patients' needs for IV fluid therapy and their responses to it will vary. Careful monitoring and daily assessment, informed by communication between the expert and patients, should therefore be detailed in an IV fluid management plan in the medical record.

Quality measures

Structure

Evidence of local arrangements to ensure that adults receiving IV fluid therapy in hospital have an IV fluid management plan, determined by and reviewed by an expert, which includes the fluid and electrolyte prescription for the next 24 hours and arrangements for assessing patients and monitoring their plan.

Data source: Local data collection.

Process

Proportion of adults receiving IV fluid therapy in hospital who had an IV fluid management

plan, determined by and reviewed by an expert, which included daily review of the fluid and electrolyte prescription and arrangements for assessing the patient and monitoring their plan.

Numerator – the number of adults in the denominator who had an IV fluid management plan determined by and reviewed by an expert, which included daily review of the fluid and electrolyte prescription and arrangements for assessing the patient and monitoring their plan.

Denominator – the number of adults receiving IV fluid therapy in hospital.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers (such as district general hospitals and specialist care centres) ensure that systems are in place for IV fluid management plans to be determined by and reviewed by an expert; plans should include prescriptions over the next 24 hours and arrangements for assessing patients and monitoring their plan.

Healthcare professionals, who are responsible for adults who are receiving IV fluid therapy in hospital, ensure that they determine and review an IV fluid management plan, which includes the fluid and electrolyte prescription for the next 24 hours and arrangements for assessing patients and monitoring their plan.

Commissioners (clinical commissioning groups and NHS England area teams) ensure they commission inpatient services for adults so that IV fluid therapy management plans are determined by and reviewed by an expert and include the fluid and electrolyte prescription for the next 24 hours and arrangements for assessing the patients and monitoring their plan. This can be achieved by auditing hospitals using the IV fluid audit toolkit or by monthly performance monitoring.

Adults receiving IV fluid therapy in hospital will know that they have an IV fluid management plan that has been written by and reviewed by an expert. The plan includes the details of the patient's IV fluid prescription (what is needed over the next 24 hours and how it is to be given), as well as details of the IV fluid therapy assessments and checks

that should be carried out over the next 24 hours.

Source guidance

[Intravenous fluid therapy in adults in hospital. NICE guideline CG174 \(2013, updated 2017\), recommendations 1.1.4, 1.1.6 and 1.2.4 \(key priorities for implementation\)](#)

Definitions of terms used in this quality statement

Intravenous fluid management plan

The IV fluid management plan should outline the fluid and electrolyte prescription over the next 24-hour period. It will cover the type, rate and volume of fluid, and how it is to be given. It will be determined by an expert who prescribes IV fluid therapy. Healthcare professionals should follow the IV fluid therapy algorithms in [NICE's guideline on intravenous fluid therapy in adults in hospital](#).

Assessment

Assessment of adults who are receiving IV fluid therapy will include response to the IV fluid therapy and specific checks for adverse effects of IV fluid therapy. These are described in [NICE's guideline on intravenous fluid therapy in adults in hospital](#). Assessing and monitoring IV fluid therapy will involve clinical judgement supported by laboratory results.

Monitoring of the plan

The IV fluid management plan should be monitored and reviewed within appropriate timescales. Initially, it should be reviewed daily by an expert. IV fluid management plans for patients on longer-term IV fluid therapy whose condition is stable may be reviewed less frequently. Any decisions to reduce monitoring frequency should be detailed in the IV fluid management plan. [Adapted from [NICE's guideline on intravenous fluid therapy in adults in hospital](#), recommendations 1.1.4, 1.1.6, 1.1.8 and 1.2.4]

Expert

NICE's guideline on intravenous fluid therapy in adults in hospital defines an expert, in this context, as a healthcare professional who has core competencies to diagnose and manage acute illness. These competencies can be delivered by a variety of models at a local level, such as a critical care outreach team, a hospital-at-night team or a specialist trainee in an acute medical or surgical specialty.

Quality statement 4: Identifying and reporting consequences of fluid mismanagement

Quality statement

For adults who receive intravenous (IV) fluid therapy in hospital, clear incidents of fluid mismanagement are reported as critical incidents.

Rationale

There are a number of potential adverse consequences of IV fluid therapy, including unnecessarily prolonged dehydration, over hydration or significant electrolyte imbalance, which may be identified by clinical and biochemical monitoring. Not all adverse consequences of IV fluid therapy are due to fluid mismanagement, but clinically significant problems caused by IV fluid mismanagement should be reported as critical incidents. By routinely reporting these events, even when they are well-managed, hospitals will increase learning, improving the likelihood of better patient outcomes.

Quality measures

Structure

Evidence of local arrangements to ensure that clear incidents of fluid mismanagement are reported as critical incidents for adults receiving IV fluid therapy in hospital.

Data source: Local data collection.

Process

Proportion of clear incidents of fluid mismanagement recorded for adults receiving IV fluid therapy in hospital that are reported as critical incidents.

Numerator – the number of clear incidents of fluid mismanagement in the denominator for which a critical incident is reported.

Denominator – the number of clear incidents of fluid mismanagement recorded for adults receiving IV fluid therapy in hospital.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers (such as district general hospitals and specialist care centres) ensure that systems are in place for reporting clear incidents of fluid mismanagement as critical incidents.

Healthcare professionals who care for adults receiving IV fluid therapy in hospital should assess patients' responses to IV fluid therapy and report clear incidents of fluid mismanagement as critical incidents.

Commissioners (clinical commissioning groups and NHS England area teams) ensure that they commission services for adults receiving IV fluid therapy in hospital from providers that report clear incidents of fluid mismanagement as critical incidents. This can be achieved by ensuring that providers share lessons learned from critical incident investigations.

Adults receiving IV fluid therapy in hospital are cared for in a hospital that has systems set in place so that IV fluid therapy problems (for example, patients not getting enough IV fluid and becoming severely dehydrated) are reported and dealt with correctly.

Source guidance

Intravenous fluid therapy in adults in hospital. NICE guideline CG174 (2013, updated 2017), recommendations 1.2.6 (key priorities for implementation)

Definitions of terms used in this quality statement

Clear incidents of fluid mismanagement

The identification and reporting of incidents of fluid mismanagement should be good practice. It is better to identify and report such incidents than not to identify them, or not to report them if they are identified. Therefore, implementing the quality standard may see an initial increase in incident reporting, reflecting improved identification and reporting rather than worse practice.

Recommendation 1.2.6 (key priority for implementation) in [NICE's guideline on intravenous fluid therapy in adults in hospital](#) provides the following framework for identifying and reporting adverse consequences in the context of IV fluid management based on Guideline Development Group consensus:

Consequences of fluid mismanagement to be reported as critical incidents

Consequence of fluid mismanagement	Identifying features	Time frame of identification
Hypovolaemia	<p>Patient's fluid needs not met by oral, enteral or IV intake and</p> <ul style="list-style-type: none"> • Features of dehydration on clinical examination • Low urine output or concentrated urine • Biochemical indicators, such as more than 50% increase in urea or creatinine with no other identifiable cause 	Before and during IV fluid therapy

Consequence of fluid mismanagement	Identifying features	Time frame of identification
Pulmonary oedema (breathlessness during infusion)	<ul style="list-style-type: none"> • No other obvious cause identified (for example, pneumonia, pulmonary embolus or asthma) • Features of pulmonary oedema on clinical examination • Features of pulmonary oedema on X-ray 	During IV fluid therapy or within 6 hours of stopping IV fluids
Hyponatraemia	<ul style="list-style-type: none"> • Serum sodium less than 130 mmol/l • No other likely cause of hyponatraemia identified 	During IV fluid therapy or within 24 hours of stopping IV fluids
Hypernatraemia	<ul style="list-style-type: none"> • Serum sodium 155 mmol/l or more • Baseline sodium normal or low • IV fluid regimen included 0.9% sodium chloride • No other likely cause of hypernatraemia identified 	During IV fluid therapy or within 24 hours of stopping IV fluids
Peripheral oedema	<ul style="list-style-type: none"> • Pitting oedema in extremities and/or lumbar sacral area • No other obvious cause identified (for example, nephrotic syndrome or known cardiac failure) 	During IV fluid therapy or within 24 hours of stopping IV fluids
Hyperkalaemia	<ul style="list-style-type: none"> • Serum potassium more than 5.5 mmol/l • No other obvious cause identified 	During IV fluid therapy or within 24 hours of stopping IV fluids

Consequence of fluid mismanagement	Identifying features	Time frame of identification
Hypokalaemia	<ul style="list-style-type: none"> • Serum potassium less than 3.0 mmol/l likely to be due to infusion of fluids without adequate potassium provision • No other obvious cause (for example, potassium-wasting diuretics, refeeding syndrome) 	During IV fluid therapy or within 24 hours of stopping IV fluids

Using the quality standard

Quality measures

The quality measures accompanying the quality statements aim to improve the structure, process and outcomes of care in areas identified as needing quality improvement. They are not a new set of targets or mandatory indicators for performance management.

See [how to use quality standards](#) for further information, including advice on using quality measures.

Levels of achievement

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so achievement levels of 100% should be aspired to (or 0% if the quality statement states that something should not be done). However, NICE recognises that this may not always be appropriate in practice, taking account of safety, choice and professional judgement, and therefore desired levels of achievement should be defined locally.

Using other national guidance and policy documents

Other national guidance and current policy documents have been referenced during the development of this quality standard. It is important that the quality standard is considered alongside the documents listed in [development sources](#).

Diversity, equality and language

During the development of this quality standard, equality issues have been considered and [equality assessments for this quality standard](#) are available.

Good communication between healthcare professionals and adults receiving intravenous (IV) fluid therapy in hospitals is essential. Treatment, care and support, and the information given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. Adults receiving IV fluid therapy in hospitals should have access to an interpreter or advocate if needed.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

Development sources

Further explanation of the methodology used can be found in the [quality standards process guide](#) on the NICE website.

Evidence sources

The document below contains recommendations from NICE guidance that were used by the Quality Standards Advisory Committee to develop the quality standard statements and measures.

[Intravenous fluid therapy in adults in hospital. NICE guideline CG174 \(2013, updated 2017\)](#)

Related NICE quality standards

- [Emergency and acute medical care in over 16s. NICE quality standard 174 \(2018\)](#)
- [Trauma. NICE quality standard 166 \(2018\)](#)
- [Acute kidney injury. NICE quality standard 76 \(2014\)](#)
- [Renal replacement therapy services for adults. NICE quality standard 72 \(2014, updated 2018\)](#)
- [Sepsis. NICE quality standard 161 \(2017, updated 2020\)](#)
- [Delirium in adults. NICE quality standard 63 \(2014\)](#)
- [Infection prevention and control. NICE quality standard 61 \(2014\)](#)
- [Patient experience in adult NHS services. NICE quality standard 15 \(2012, updated 2019\)](#)
- [Chronic kidney disease in adults. NICE quality standard 5 \(2011, updated 2017\)](#)

A full list of NICE quality standards is available from the [quality standards topic library](#).

Quality Standards Advisory Committee and NICE project team

Quality Standards Advisory Committee

This quality standard has been developed by Quality Standards Advisory Committee 4.

Membership of this committee is as follows:

Professor Damien Longson (Chair)

Associate Medical Director and Consultant Psychiatrist, Manchester Mental Health and Social Care Trust

Ms Alison Allam

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Head of Operations, Greater Manchester West Mental Health NHS Foundation Trust

The following specialist members joined the committee to develop this quality standard:

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Clinical Director of Acute Medicine, Guys and St Thomas' Hospital Trust

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About this quality standard

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. NICE quality standards draw on existing NICE or NICE-accredited guidance that provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement.

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so achievement levels of 100% should be aspired to (or 0% if the quality statement states that something should not be done). However, this may not always be appropriate in practice. Taking account of safety, shared decision-making, choice and professional judgement, desired levels of achievement should be defined locally.

Information about [how NICE quality standards are developed](#) is available from the NICE website.

See our [webpage on quality standard advisory committees](#) for details of standing committee 4 members who advised on this quality standard. Information about the topic experts invited to join the standing members is available from the [webpage for this quality standard](#).

This quality standard has been included in the [NICE Pathway on intravenous fluid therapy in adults in hospital](#), which brings together everything we have said on a topic in an interactive flowchart.

NICE has produced a [quality standard service improvement template](#) to help providers make an initial assessment of their service compared with a selection of quality statements. This tool is updated monthly to include new quality standards.

NICE produces guidance, standards and information on commissioning and providing high-quality healthcare, social care, and public health services. We have agreements to provide certain NICE services to Wales, Scotland and Northern Ireland. Decisions on how NICE guidance and other products apply in those countries are made by ministers in the Welsh government, Scottish government, and Northern Ireland Executive. NICE guidance or other products may include references to organisations or people responsible for

commissioning or providing care that may be relevant only to England.

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Endorsing organisation

This quality standard has been endorsed by NHS England, as required by the Health and Social Care Act (2012)

Supporting organisations

Many organisations share NICE's commitment to quality improvement using evidence-based guidance. The following supporting organisations have recognised the benefit of the quality standard in improving care for patients, carers, service users and members of the public. They have agreed to work with NICE to ensure that those commissioning or providing services are made aware of and encouraged to use the quality standard.

- [ICUsteps](#)
- [Royal College of Nursing \(RCN\)](#)
- [UK Clinical Pharmacy Association \(UKCPA\)](#)